

Name: _____

Period: _____

Unit 12: Reproductive System

Test Review

1. List the general functions of the reproductive system.

2. Describe the anatomy of the male genitalia.
 - a. testes:
 - b. epididymis:
 - c. vas (ductus) deferens:
 - d. ejaculatory duct:
 - e. prostate gland:
 - f. seminal vesicles:
 - g. urethra:
 - h. penis:
3. What are the two major functions of the testes?
 - a.
 - b.
4. What are the primary functions of testosterone in the male?

5. Describe the anatomy of the female reproductive system.
 - a. ovaries:
 - b. uterine tubes (fallopian tubes)
 - c. uterus:
 - d. vagina:

6. Describe the structure and function of the uterine tubes, including fimbriae and infundibulum.
 - a. fimbriae:
 - b. infundibulum:
7. Describe the structure and function of the uterus, cervix, fundus, and the three uterine layers.
 - a. functions of the uterus:
 - b. cervix:
 - c. fundus:
 - d. perimetrium:
 - e. myometrium:
 - f. endometrium:
8. Describe the menstrual cycle including the ovarian cycle.
9. Describe the physiological effects of estrogen, progesterone, and relaxin.
 - a. estrogen:
 - b. progesterone:
 - c. relaxin:
10. Define the following sequence of events that occur during human development.
 - a. fertilization:
 - b. zygote:
 - c. implanation:
 - d. embryo:
 - e. fetus:

11. Contrast the general outcomes of spermatogenesis vs. oogenesis.
 - a. spermatogenesis:

 - b. oogenesis:

12. Identify the principle events associated with the three stages of labor.
 - a. stage 1: dilation and effacement:

 - b. stage 2: delivery and birth:

 - c. stage 3: placental expulsion:

13. Describe the diseases and disorders associated with the reproductive system.
 - a. Breast cancer:

 - b. Testicular cancer:

 - c. Cervical cancer:

 - d. Ovarian cancer:

 - e. Prostate cancer:

 - f. Endometriosis:

 - g. Infertility:

 - h. Impotence:

- i. Gonorrhea:
- j. Syphilis:
- k. Genital Herpes:
- l. Chlamydia:
- m. Genital Warts:
- n. Trichomoniasis:
- o. HPV:

Unit 12: Reproductive System

Test Review - KEY

1. List the general functions of the reproductive system.
 - Production of offspring to continue the species.
 - Sexual reproduction is the process by which genetic material is combined and passed from generation to generation.
 - Produces and secretes hormones involved in the development and maintenance of the male and female reproductive organs as well as many other metabolic and physiological processes throughout the body.

2. Describe the anatomy of the male genitalia.
 - a. testes: The testes are the male gonads and are egg-shaped structures enclosed in a dense fibrous capsule called the tunica albuginea. They are suspended within the scrotum by the spermatic cord. The testes are divided into sections called lobules which contain the seminiferous tubules.

 - b. epididymis: The epididymis is an almond shaped organ that lies along the posterior border of the testes. It consists mostly of a tightly coiled tube called the ductus epididymis which measures about 20 feet in length.

 - c. vas (ductus) deferens: The ductus deferens is a long duct (18 inches) which connects the epididymis to the ejaculatory duct posterior to the urinary bladder. The ductus deferens is composed of smooth muscle and is lined with epithelial tissue. The ductus deferens helps to form the spermatic cord and passes through the inguinal canal

 - d. ejaculatory duct: The ejaculatory duct lies posterior to the urinary bladder and is formed by the union of the duct from the seminal vesicle and the ductus deferens. It will lead into the urethra.

 - e. prostate gland: The prostate gland is a single donut shaped gland about the size of a chestnut located inferiorly to the urinary bladder and surrounds the urethra. It is a common cancer site for adult males.

 - f. seminal vesicles: The seminal vesicles are two tubular glands located on the posterior surface of the urinary bladder. It will unite with the ductus deferens to form the ejaculatory duct.

 - g. urethra: The urethra is located from the base of the bladder, through the penis and ends in the urethral meatus. It measures about 8 inches in length.

 - h. penis: The penis is a cylindrical organ which surrounds the urethra. It consists of a body, root, and glans penis.

3. What are the two major functions of the testes?
 - a. Spermatogenesis or the production of sperm occurs in the seminiferous tubules.
 - b. Production of the male hormone testosterone occurs in the interstitial cells.
4. What are the primary functions of testosterone in the male?
 - A. Controls growth and development
 - B. Maintenance of the male sex organs
 - C. Stimulates bone growth
 - D. Stimulates protein anabolism
 - E. Responsible for closure of the epiphyseal plate
 - F. Influences sexual behavior
 - G. Supports final maturation of sperm
 - H. Stimulates development of secondary male sex characteristics
5. Describe the anatomy of the female reproductive system.
 - a. ovaries: The ovaries are the paired female gonads about the size and shape of almonds located within the pelvic cavity. There is an outer cortex and an inner medulla. The outer cortex contains follicles which support the ova or eggs.
 - b. uterine tubes (fallopian tubes): The uterine tubes (Fallopian tubes or oviducts) measure about five inches in length. At one end, there is an expanded infundibulum or the funnel-shaped, open, distal end of the uterine tube near the ovaries. The infundibulum contains the fimbriae or finger-like projections at the end of the infundibulum to draw the ova, which have been released from the ovaries, into the uterine tubes
 - c. uterus: The uterus is an inverted pear shaped muscular organ located in the pelvic cavity. It is divided into three sections - the fundus, body, and the cervix.
 - d. vagina: The vagina is a tubular fibromuscular organ lined with mucous membrane. It contains several functional features including the fornix, rugae, vaginal orifice, and the hymen.

6. Describe the structure and function of the uterine tubes, including fimbriae and infundibulum.
 - a. fimbriae: The infundibulum contains the fimbriae or finger-like projections at the end of the infundibulum to draw the ova, which have been released from the ovaries, into the uterine tubes.
 - b. infundibulum: At one end, there is an expanded infundibulum or the funnel-shaped, open, distal end of the uterine tube near the ovaries.
7. Describe the structure and function of the uterus, cervix, fundus, and the three uterine layers.
 - a. functions of the uterus: The function of the uterus is to serve as the site of gestation or pregnancy for the developing embryo/fetus.
 - b. cervix: the narrow, thick muscular area that opens into the vagina.
 - c. fundus: the superior dome-shaped area the uterus above the openings to the uterine tubes.
 - d. perimetrium: the outermost layer of the uterus which provides a small amount of protection to the uterus.
 - e. myometrium: the middle, smooth muscle layer of the uterus. It makes up the majority of the uterus.
 - f. endometrium: the innermost layer of the uterus
-lining of the uterine cavity which is shed during menstruation.
-generate a new lining following menstruation.
8. Describe the menstrual cycle including the ovarian and uterine cycles.
 - A. Ovarian Cycle: The ovarian cycle is the monthly changes in the ovary associated with the maturation of an ovum.
 - B. Menstrual Cycle: The menstrual cycle is the monthly changes in the endometrium of the uterus.
9. Describe the physiological effects of estrogen, progesterone, and relaxin.
 - a. estrogen:
 - Responsible for the development and maintenance of the female reproductive system.
 - Initiates the growth of the endometrium of the uterus.
 - Helps control fluid and electrolyte balance.
 - Maintains blood calcium levels and bone density.
 - Increase protein anabolism.
 - Body fat distribution associated with females (buttocks and thighs).

b. progesterone:

- Works in conjunction with estrogen to prepare the endometrial lining for implantation of a fertilized ovum.
- Stimulates milk secretion.
- Maintains the uterine linings during pregnancy.

c. relaxin:

- Relaxes the pubic symphysis .
- Helps dilate the uterine cervix to facilitate delivery of the fetus.

10. Define the following sequence of events that occur during human development.

- a. fertilization: Fertilization or conception is the union of a sperm cell with an oocyte (ovum). It occurs in the uterine tubes.
- b. zygote: a diploid zygote, or a cell which contains 46 chromosomes.
- c. implanation: The trophoblast contacts the endometrium about 6 days after fertilization and embeds itself into the endometrium.
- d. embryo: from implantation to 8 weeks
- e. fetus: from 8 weeks until birth

11. Contrast the general outcomes of spermatogenesis vs. oogenesis.

- a. spermatogenesis: The formation of four haploid sperm cells in the male testes
- b. oogenesis: The formation of a single haploid egg cell in the female ovaries.

12. Identify the principle events associated with the three stages of labor.

- a. stage 1: dilation and effacement: Contractions of the myometrium increase in frequency and strength pushing the fetus against the cervix. The amnion or water bag surrounding the fetus typically ruptures. Cervix dilates in response to pressure from the fetus. Stronger and more frequent contractions. Once the cervix thins and the opening dilates to 10 cm, the second stage of labor begins.
- b. stage 2: delivery and birth: The fetus is pushed through the birth canal to the outside.
- c. stage 3: placental expulsion: Uterine contractions push the placenta out of the uterus. The uterus contracts to prevent bleeding.

13. Describe the diseases and disorders associated with the reproductive system.

- a. Breast cancer: Breast cancer is second only to lung cancer as the leading cause of cancer death among women in the United States. Treatment includes a lumpectomy or a mastectomy and may be followed with chemotherapy and/or radiation. Since the breast has so many lymph nodes nearby, the chances of metastasis are high involving other organs such as the brain, lung, intestines, bone, and liver.
- b. Testicular cancer: Testicular cancer accounts for only 1 percent of all cancers in men. Men should see a doctor if they notice any of the following symptoms: a painless lump or swelling in the testicle, a feeling of heaviness in the scrotum. A man should see his health care provider immediately. Treatment includes an orchiectomy which may be followed by chemotherapy.
- c. Cervical cancer: Cervical cancer is cancer of the uterine cervix.
- d. Ovarian cancer: Ovarian cancer is cancer of the ovaries and is the seventh most common cancer and the fifth leading cause of cancer death after lung, breast, colorectal, and pancreatic.
- e. Prostate cancer: Prostate cancer is the cancer of the prostate and is the second most common form of cancer among men in the United States.
- f. Endometriosis: Endometriosis is the presence of the endometrium outside of the uterus
- g. Infertility: inability to produce offspring
- h. Impotence: Impotence, otherwise known as Erectile Dysfunction or ED. impotence," is the repeated inability to get or keep an erection firm enough for sexual intercourse.
- i. Gonorrhea: Gonorrhea is a sexually transmitted disease of the reproductive and urinary systems caused by the bacterium *Neisseria gonorrhoea*.
- j. Syphilis: Syphilis is a chronic, infectious sexually transmitted disease that begins in the mucous membranes and spread throughout the body by the bloodstream.
- k. Genital Herpes: Genital herpes is an infection of the reproductive system cause by the herpes simplex II virus.

l. Chlamydia: Chlamydia is the most common sexually transmitted disease in the United States, afflicting millions of people annually. The cause is a bacterium known as Chlamydia trachomatis. The bacterium affects the reproductive, urinary, and lymphatic systems.

m. Genital Warts: Genital warts are transmitted sexually through contact. The warts appear on the genitalia in warm, moist surfaces such as in the urethra of males and on the vulva, vagina and cervix of females.

n. Trichomoniasis: Trichomoniasis is an infection of trichomonas. Trichomonas is a parasitic protozoa which may cause a vaginal infection resulting in increased foul-smelling vaginal discharge along with itching and burning of the vulva. It is treated with anti-fungal medication.

o. HPV: Human papillomavirus is also called HPV. It is a virus that includes more than 100 types, over 30 of which are sexually transmitted. The types of HPV that infect the genital area are known as genital HPV.